

What is claimed is:

1. A transmission apparatus comprising:

2 filter means for reducing leakage power
3 outside a transmission signal band, said filter means
4 having a first attenuation amount more than a
5 predetermined amount or a second attenuation amount not
6 more than the predetermined amount selectively set in a
7 range higher than a transmission signal band;

8 modulation means for modulating the
9 transmission signal output from said filter means; and

10 control means for setting one of the first and
11 second attenuation amounts in said filter means in
12 accordance with a use situation of a band adjacent to
13 the transmission signal band.

2. An apparatus according to claim 1, wherein

2 said filter means comprises

3 a first low-pass filter having the first
4 attenuation amount, and

5 a second low-pass filter having the second
6 attenuation amount, and

7 said control means selects one of said first
8 and second low-pass filters in accordance with the use
9 situation of the band adjacent to the transmission
10 signal band.

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3. An apparatus according to claim 2, wherein

2 said first low-pass filter comprises

3 a first delay element group formed from a

4 plurality of delay elements cascade-connected,

5 a second delay element group formed from a

6 plurality of delay elements cascade-connected to receive

7 an output from said first delay element group,

8 a first accumulator for cumulatively adding

9 weighted outputs from the delay elements of said first

10 delay element group, and

11 a second accumulator for cumulatively adding

12 weighted outputs from the delay elements of said second

13 delay element group, and

14 said second low-pass filter comprises

15 said first delay element group, and

16 said first accumulator.

4. An apparatus according to claim 3, further

2 comprising

3 a bypass path for bypassing said second

4 accumulator,

5 a first changeover switch for selectively

6 connecting an output terminal of said accumulator to one

7 of an input terminal of said second accumulator and one

8 terminal of said bypass path, and

9 a second changeover switch for selectively

10 connecting an output terminal of said filter to an

11 output terminal of said second accumulator and the other
12 terminal of said bypass path.

5. An apparatus according to claim 2, wherein
2 said apparatus further comprises switch means
3 for selecting one of said first and second low-pass
4 filters, and
5 said control means controls said switch means
6 to extract one of outputs from said first and second
7 low-pass filters as a transmission signal.

6. An apparatus according to claim 2, wherein
2 when said first low-pass filter is selected,
3 power supply to said second low-pass filter is stopped,
4 and
5 when said second low-pass filter is selected,
6 power supply to said first low-pass filter is stopped.

7. An apparatus according to claim 1, wherein
2 said filter means, modulation means, and control means
3 are arranged in one of a mobile station and a base
4 station of a mobile communication system.

8. An apparatus according to claim 7, wherein
2 said apparatus further comprises extraction
3 means for extracting information related to the use
4 situation of the band adjacent to the transmission

5 signal band from a reception signal, and
6 said control means performs operation of
7 setting the first and second attenuation amounts on the
8 basis of an output from said extraction means.

9. An apparatus according to claim 7, wherein
2 said apparatus further comprises monitor means
3 for monitoring the use situation of the band adjacent to
4 the transmission signal band from a reception signal,
5 and
6 said control means performs operation of
7 setting the first and second attenuation amounts on the
8 basis of an output from said monitor means.

10. An apparatus according to claim 7, wherein
2 when the band adjacent to the transmission signal band
3 is used in an adjacent/superposing system, said control
4 means sets the first attenuation amount in said filter
5 means, and when the band adjacent to the transmission
6 signal band is not used in the adjacent/superposing
7 system, said control means sets the second attenuation
8 amount in said filter means.

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